

## A New Species of the Group of *Trechiana oni* (Coleoptera, Trechinae) from Okayama Prefecture, Western Honshu, West Japan

**Hisashi ASHIDA**

7–4–201 Shimeien, Ibaraki, Osaka, 567–0045 Japan

**Abstract** A new member of the group of *Trechiana oni* is described from the northeastern part of Okayama Prefecture, western Honshu, West Japan, under the name of *Trechiana yamashitai*. Although this new species is closely related to *T. yukikoe*, it is easily distinguished from the latter species by the strongly constricted pronotal base, and the sharper and more protruding pronotal hind angles. The most remarkable difference is that *T. yamashitai* has a well developed copulatory piece in the inner sac of aedeagus, while *T. yukikoe* is devoid of it.

The group of *Trechiana oni* is distributed on the Chûgoku Hills, the northwestern part of the Kii Peninsula, Awaji-shima Island, and the northeastern part of Shikoku Island. *Trechiana yukikoe* S. UENO (1985a, pp. 168, 178, figs. 9–11), a member of the group of *T. oni*, was described from the Wakasugi-tôge in Nishiawakura-son, the northeastern corner of Okayama Prefecture. Although it was tentatively included in the *fujitai* complex which is one of the subgroups of the *oni* group, it was recognized as an isolated species from the other members of this complex in view of its narrow and parallel-sided hind body and the peculiar structure of the male genitalia. Neither *T. yukikoe* nor its relatives have been additionally recorded from elsewhere after the original description. Recently, several specimens of *Trechiana* with resemblance to *T. yukikoe* were brought about from the southeastern side of Mt. Nagi-no-sen in Nagi-chô, about 20 km west-southwest of the Wakasugi-tôge, by Mr. Shun-Ichi YAMASHITA. After a dissection study of the male genitalia, it has become clear that this is a distinct new species. In this paper, I am going to describe it under the name of *T. yamashitai*.

The abbreviations used herein are as follows: HW – greatest width of head; PW – greatest width of pronotum; PL – length of pronotum, measured along the midline; PA – width of pronotal apex; PB – width of pronotal base; EW – greatest width of elytra; EL – greatest length of elytra; M – arithmetic mean.

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***Trechiana* (s. str.) *yamashitai* ASHIDA, sp. nov.**

[Japanese name: Nagi-mekura-chibigomimushi]  
(Figs. 1–5)

*Trechiana* sp.: ASHIDA, 2000, Checklist of Trechinae from Japan, vers. VIII, Kyoto, p. 11.

Length: 5.05–5.65 mm (from apical margin of clypeus to apices of elytra).

Closely related to *T. yukikoe* of the group of *T. oni*, but externally distinguished from the latter species by the smaller and slenderer body, more strongly contracted pronotal base, and sharper and more protruding pronotal hind angles. Also similar to *T. yukikoe* in the basic structure of the male genital organ, but easily distinguished by the presence of a well developed copulatory piece in the inner sac.

Color reddish brown with yellowish brown appendages. Body smaller on an average and slenderer than in *T. yukikoe*. Head similar to that of *T. yukikoe* though obviously narrower; antennae somewhat slenderer; remnants of eyes distinct as in *T. yukikoe* though smaller. Pronotum cordate, wider than length, widest at two-thirds from base, and more strongly contracted behind than in *T. yukikoe*; PW/HW 1.34–1.43 (M 1.40), PW/PL 1.11–1.20 (M 1.15), PW/PA 1.38–1.48 (M 1.42), PW/PB

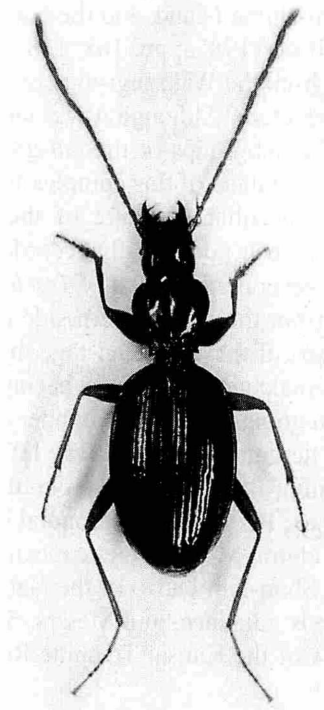
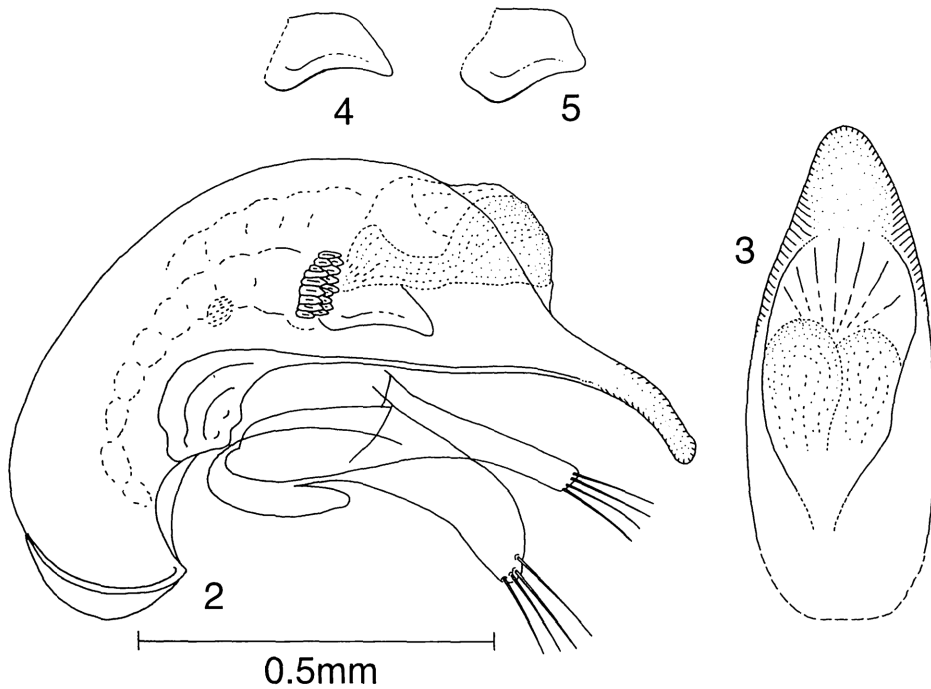


Fig. 1. *Trechiana yamashitai* ASHIDA, sp. nov., ♂, from Jabuchi-no-taki in Nagi-chō; dorsal view.



Figs. 2–5. Male genitalia of *Trechiana yamashitai* ASHIDA, sp. nov., ♂, from Jabuchi-no-taki in Nagichô; left lateral view (2), apical part of aedeagus, dorso-apical view (3), separated copulatory piece, left lateral view (4), and the same, left dorso-lateral view (5).

1.43–1.52 (M 1.50); surface as in *T. yukikoe* though the median line is deeper and clearer; sides strongly arcuate in front, deeply sinuate between one-seventh and one-eighth from base, and then widely divergent again towards hind angles, which are sharp and protrude postero-laterally; postangular seta absent; base obviously emarginate at the median part, and more or less narrower than apex, PB/PA 0.92–1.00 (M 0.95). Elytra similar to those of *T. yukikoe*, but smaller and less ample, particularly in apical part; EW/PW 1.60–1.75 (M 1.68), EL/PL 2.78–3.00 (M 2.92), EL/EW 1.47–1.59 (M 1.52); prehumeral borders, shoulders, sides, striation and chaetotaxy as in *T. yukikoe*; setiferous dorsal pores on stria 5 located at  $1/9$ – $1/8$  and  $1/2$ – $4/7$  from base, respectively. Legs slenderer than in *T. yukikoe*.

Male genital organ basically similar to that of *T. yukikoe* in external characters, but clearly different in the structure of inner armature. Aedeagus fairly large and robust, about one-third as long as elytra, with ample basal part and long flattened apical lobe; basal part larger and more strongly curved ventrad than in *T. yukikoe*, with fairly large basal orifice, whose sides are more deeply emarginate; sagittal aileron narrow and hyaline as in *T. yukikoe*; viewed laterally, apical part similar to that of *T. yukikoe*; viewed dorsally, apical lobe somewhat narrower than in *T. yukikoe*. Inner

sac armed with two sclerotized teeth-patches and a well developed copulatory piece; left proximal teeth-patch small, formed by heavily sclerotized teeth; dorso-apical teeth-patch much larger than the left proximal one, extending from left lateral to dorsal, though consisting of smaller and rather lightly sclerotized teeth; copulatory piece lying below the proximal teeth-patch, moderately sclerotized, pentagonal with the left margin sinuate, with the tip produced ventro-apically. Styles as in *T. yukikoeae*.

*Type series.* Holotype: ♂, 14-V-2000, H. ASHIDA leg. Allotype: ♀, the same data as for holotype. Paratypes: 1 ♀, 26-V-1999, S. YAMASHITA leg.; 2 ♀♀, 6-VII-1999, S. YAMASHITA leg.; 2 ♂♂, 1 ♀, 7-X-1999, S. YAMASHITA leg.; 1 ♂, 1 ♀, 14-V-2000, H. ASHIDA leg.; 2 ♀♀, 4-VII-2000, S. YAMASHITA leg.; 2 ♂♂, 1 ♀, 15-IX-2000, Y. OKUDA & A. SÔMA leg. The holotype and allotype will be preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo.

*Type locality.* Jabuchi-no-taki (alt. 520 m) at the southeastern side of Mt. Nagino-sen (1,240 m in height), in Nagi-chô of Okayama Prefecture, western Honshu, West Japan.

*Further record.* 1 ♀, 20-VIII-1998, S. YAMASHITA leg. Locality: Maguwa, Nagi-chô, Okayama Prefecture.

*Notes.* The *fujitai* complex of *Trechiamma* so far consists of eight species, and has been known from the northeastern corner of Okayama Prefecture and the western part of Hyôgo Prefecture. Among them, *T. yukikoeae* was recognized as an isolated species, because of the unique characteristics of the body and the male genital organ, and of the coexistence with *T. moritai*, a member of the same complex (UENO, 1985 a). Since *T. yamashitai* is obviously related to *T. yukikoeae* as described above, these two species may form a separate species-group from the *fujitai* complex.

Jabuchi-no-taki, the type locality of the present species, is located 21 km west-southwest of the Wakasugi-tôge, the type locality of both *T. yukikoeae* and *T. moritai*; 22 km west by north of Ruri-dera in Nankô-chô, that of *T. fujitai*; and 24 km north-northwest of Kamiakisato in Kôzuki-chô, that of *T. carinatus*. Thus, *T. yamashitai* is at present the westernmost species of the *fujitai* complex. Jabuchi-no-taki is about 23 km east by north of Yamoto in Kagamino-chô, the type locality of *T. angustus*, and about 25 km southeast of the Nakatsukô-gawa Valley in Kamisaibara-son, the type locality of *T. yamajii*, both of which belong to other complexes of the group of *T. oni*.

There are waterfalls called Jabuchi-no-taki in the valley where *T. yamashitai* was found. The type specimens were obtained from the upper hypogean zone at the stream-side around the waterfalls. One female specimen obtained from Maguwa, about 2 km east of Jabuchi-no-taki, could not be distinguished from the type specimens.

## 要 約

芦田 久：岡山県より見いだされたナガチビゴミムシ属オニメクラチビゴミムシ群の1新種。——岡山県奈義町那岐山南東麓の蛇淵の滝より、オニメクラチビゴミムシ群の1新種、ナギメクラチビゴミムシ *Trechiamma yamashitai* sp. nov. を記載した。本種は、岡山県西栗倉村若杉

峠から記載されたユキコメクラチビゴミムシ *T. yukikoe* S. UENO に近似するが、前胸後半が強くせばまる点、後角が鋭く外側に突出する点により区別される。また、ユキコメクラチビゴミムシでは雄交尾器内袋中に交尾片を欠くのに対し、本種ではよく発達した交尾片を内蔵することにより容易に識別される。ユキコメクラチビゴミムシは、その特異な形態からフジタメクラチビゴミムシ系の中では孤立した種であると考えられている。ユキコメクラチビゴミムシと本種は、フジタメクラチビゴミムシ系から派生した独自の一群を形成する可能性もあるが、ここでは従来の扱いに準じフジタメクラチビゴミムシ系に含めておく。

### References

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